

ABSTRACT OF THE DISCLOSURE

Crystalline superfine particles capable of emitting light depending upon a time-rate-of-change of a stress and controlled in grain size in the range from 5 nm to 100 nm are complexed with another material such as resin. The crystalline superfine particles are manufactured by using aggregates of molecules, i.e. inverted micelles, which orient hydrophilic groups of surfactant molecules inward and hydrophobic groups outward in a nonpolar solvent and which contain metal ions of a metal for forming the crystalline superfine particles dissolved in water inside the inverted micelles. Alternatively, they are manufactured by using inverted micelles enveloping precursor superfine particles, in which precursor superfine particles are enveloped in water inside the inverted micelles. The crystalline superfine particles are excellent in dispersibility in another material to be complexed, enhanced in emission efficiency and usable to make a transparent stress emission material. The complex material obtained is used to manufacture artificial light-emitting hair structures, artificial light-emitting skin, artificial light-emitting bodies, artificial light-emitting fabrics, and others.